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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,017	07/31/2003	Olaf Abels	71084	9343
23872	7590	12/07/2005		
MCGLEW & TUTTLE, PC P.O. BOX 9227 SCARBOROUGH STATION SCARBOROUGH, NY 10510-9227			EXAMINER GARCIA, ERNESTO	
			ART UNIT 3679	PAPER NUMBER

DATE MAILED: 12/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/632,017	ABELS ET AL.	
	Examiner	Art Unit	
	Ernesto Garcia	3679	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14, 16-23 and 28-31 is/are pending in the application.
- 4a) Of the above claim(s) 2-4, 6-8, 11, 13, 16, 18, 19, 21 and 22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 5, 9, 10, 12, 14, 17, 20, 23 and 28-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Information Disclosure Statement

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the examiner on form PTO-892 has cited the references, they have not been considered.

Election

Claims 2-4, 6-8, 11, 13, 16, 18, 19, 21 and 22 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 4/23/04.

Drawings

The drawings are objected to because the cross hatching of the sealing bellows 4 and the sliding ring in Figures 1, 5, 6, and 9, is shown incorrectly. The cross-hatching of the sealing bellows, in Figures 2 and 7, is shown incorrectly. The cross hatching of the ball race 5A in Figure 6 is shown incorrectly. Further, Figure 10 does not comply with 37 CFR 1.84(i) since the cross sectional view is interposed on the front sectional view, or vice versa.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "4.3," and "5.1" have both been used to designate the same seal in Figures 1, 2, and 9.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "4.3," and "5.1" have both been used to designate the same seal in Figures 5 and 6.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "4.3,5.1" has been used to designate both a seal with one configuration (Figs. 1, 2, 9) and a seal with another configuration (Fig. 5 and 6).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended". If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claim 30 is objected to because the limitation "the inner surface" in line 3 should be --an inner surface--. Appropriate correction is required. For purposes of examining the instant invention, the examiner has assumed these corrections have been made.

Claim Rejections - 35 USC § 102

Claims 1, 5, 9, 10, 12, 14, 17, 20, 23, and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Yao, JP-2-199317 (see marked-up attachment in the last Office action).

Regarding claim 1, Yao, discloses, in Figures 1, 3 and 4, a ball-and-socket joint comprising a housing **6**, a bearing shell **5**, a ball pivot **2**, a sealing bellows **8**, a ball race **13**, and a sliding ring **A1**. The bearing shell **5** is inserted into the housing **6**. The ball pivot **2** with a joint ball **4** is pivotally mounted in all directions in the bearing shell **5**. The sealing bellows **8** is between the housing **6** and the ball pivot **2**. The sealing bellows **8** has a pivot-side edge area **23**. The ball race **13** is fixed on the ball pivot **2**. The sliding ring **A1** receives the pivot-side edge area **23** of the sealing bellows **8**. The sliding ring **A1** is mounted to slide in the ball race **13** and has a sliding face **A9** facing the joint ball **4** arranged adjacent to the ball race **13**. The ball race **13** has a leg **15** in contact with the sliding ring **A1**. The leg **15** comprising lugs **28** (Fig. 4) arranged at spaced locations from one another.

Regarding claim 5, the sliding ring **A1** includes an axial extension **14** and a radial extension **16**.

Regarding claim 9, the ball race **13** has an approximately U-shaped cross section.

Regarding claim 10, the sealing bellows **8** has a surface **A100** slidably in contact with a surface **A20** of the ball race **13**.

Regarding claim 12, the surface **A100** of the sealing bellows **8** forms a labyrinth seal together with the surface **A20** of the ball race **13**.

Regarding claim 14, the sliding ring **A1** is a shaped sheet metal part or a plastic molding. The sliding ring **A1** receives and holds a portion of the sealing bellows **8** between the axial extension **14** and the radial extension **16**. The axial extension **14** and the radial extension **16** are substantially perpendicular to each other. The ball race **13** is fixed to the ball pivot **2**.

Regarding claim 17, the pivot-side edge area **23** of the sealing bellows **8** forms a thickened material bead pressed against the ball race **13** or the sliding ring **A1** with an elastic pretension.

Regarding claim 20, the sliding ring **A1** has an approximately L-shaped cross section.

Regarding claim 23, the sliding ring **A1** is vulcanized directly to the pivot-side edge area **23** of the sealing bellows **8**.

Regarding claim 29, the lugs include free ends (the free ends are occupied by feature **27**; Fig. 3, or the free ends could be at the bent **15** in Fig. 4). The free ends face away from the ball pivot **2** in a radial direction (note that Figure 3 shows a free end does not face when free end is perpendicular to the ball pivot **2**, but when unassembled, the free end faces at an angle thus away). Alternatively, the bent at **15** also faces away from the ball pivot.

Claims 1 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Amrath, 4,639,159 (see marked-up attachment).

Regarding claim 1, Amrath, discloses, in Figures 2 and 3, a ball-and-socket joint comprising a housing **5**, a bearing shell **B1**, a ball pivot **3**, a sealing bellows **4**, a ball race **7**, and a sliding ring **8**. The bearing shell **B1** is inserted into the housing **5**. The ball pivot **3** with a joint ball **B2** is pivotally mounted in all directions in the bearing shell **B1**. The sealing bellows **4** is between the housing **5** and the ball pivot **3**. The sealing bellows **4** has a pivot-side edge area **B3**. The ball race **7** is fixed on the ball pivot **3**. The sliding ring **8** receives the pivot-side edge area **B3** of the sealing bellows **4**. The sliding ring **8** is mounted to slide in the ball race **7** and has a sliding face **B4** facing the joint ball **B2** arranged adjacent to the ball race **7**. The ball race **7** has a leg **10** in contact with the sliding ring **8**. The leg **10** comprising lugs **12** (Fig. 3) arranged at spaced locations from one another.

Regarding claim 28, the lugs **12** are in direct contact with the sliding ring **8**.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yao, JP-2-199317 (see marked-up attachment), as applied to claims 1, 5, 9, 10, 12, 14, 17, 20, 23, and 29 above, and further in view of Gardner, 2,197,037.

Regarding claim 30, the Japanese patent, as discussed above, discloses the sliding ring **A1** having an L-shaped cross section comprising an axial leg **A50** and a radial leg **A51**. However, the radial leg **A51** is not in sliding contact with an inner surface of the ball race **13**. Gardner teaches, in Figures 2 and 3, a radial leg **27** in sliding contact with an inner surface of a ball race **23**, as part of an alternative configuration of mounting a sealing bellows to a ball race. Therefore, as taught by Gardner, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the radial leg in sliding contact with an inner surface of the

ball race as part of an alternative design consideration for mounting a sealing bellows to the ball race.

Regarding claim 31, given the modification above, the radial leg A51 will be between the sealing bellows 8 and the lugs 28.

Response to Arguments

Applicants' arguments filed 09/28/2005 have been fully considered but they are not persuasive.

Applicants have argued that Yao fails to disclose "lugs in direct contact with the L-ring". In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the lugs are in direct contact with an L-ring) are not recited in the rejected claims by Yao. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicants have argued that Yao fails to disclose "free ends facing away from the ball pivot in the radial direction". In response, applicants should note that free ends do not necessarily need to correspond to the annular edge of the lugs as argued. In its

broadest interpretation, each of the lugs contains numerous free ends. For instance, a free end is relative. The free end could be a first face in an axial direction of the ball pivot, or another free end could be a second face opposing the first face in opposite axial direction of the ball pivot.

In respect to new claims 28, 30, and 31, applicants' arguments have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ernesto Garcia whose telephone number is 571-272-7083. The examiner can normally be reached from 9:30-5:30. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached at 571-272-7087.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

E.G.

E.G.

December 2, 2005

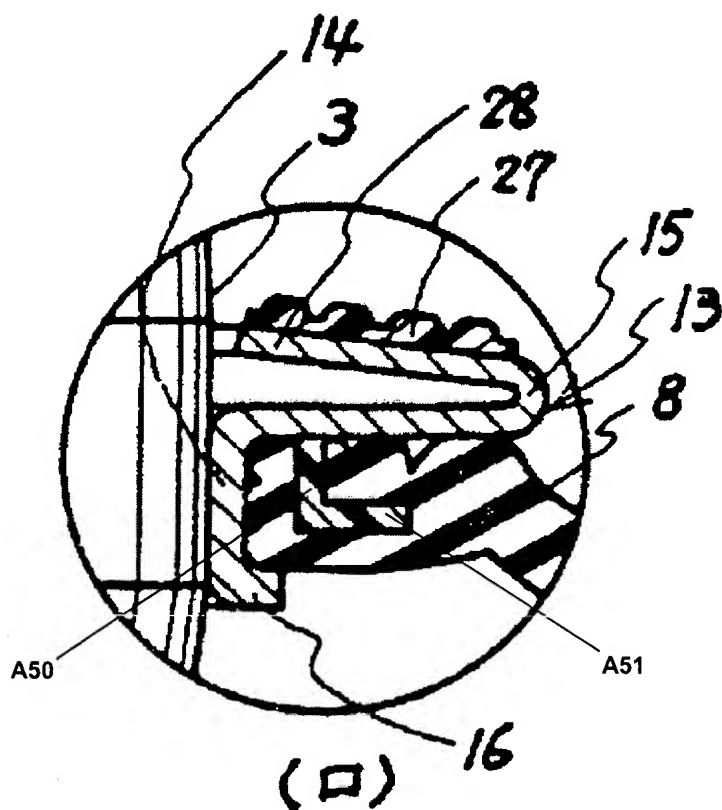
Attachment: one marked-up page of Japanese patent, 2-199317, to Yao
one marked-up page of Amrath, 4,639,159.

Daniel P Stodola

DANIEL P. STODOLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600

Art Unit: 3679

JP2-199317, Yao



Amrath, 4,639,159

